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NOTES

ON

SANITARY REFORM.

BY

A SANITARIAN.

*"LIFE IS A HOLY THING."*

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THE question of the Public Health underlies all social questions in the present day. I have no claim to assume the title of a Sanitarian beyond the interest which every intelligent person must feel in the subject.

The following pages, containing extracts from the authorities of the day, are printed as a contribution in aid of that great cause.

S. SNEADE BROWN.

PEMBROKE ROAD, CLIFTON,

BRISTOL, January, 1870.



# LETTERS ON SANITARY REFORM.

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## I

### THE HEALTH OF TOWNS.

“THE great increase of population in England, in the ten years after 1841, was found, in 1851, to be lodged in the towns. The population of the large towns was 6,838,000 in 1841, and 8,247,000 in 1851. The question of the health of towns is, therefore, a question of the strength of England.” This is one of the weighty admonitions which issue from time to time, from the office of the Registrar General. The changes are indeed great, that have been going on before our eyes for the last thirty years, and in nothing greater than in the mutations of the population, and their influx into the towns. In 1861, according to the same authority, the number of persons living in populous towns amounted to 10,930,811, and those in small towns and country districts to 9,134,386. While, in the ten years, from 1851 to 1861, small towns and country districts increased at the rate of only 3·9 per cent., over-populous cities added nearly 17 to every 100 of the population. “At the commencement of this century only 5 towns beyond the Metropolis contained a population of 50,000 persons; at the present time upwards of 30 exceed that number.” One chief cause of this mighty movement may, no doubt, be found in the demand for town labour and the stir of mind and facility of locomotion produced by the railways, but it has been aided not a little by the slow, steady, resistless operation of other causes, such as the change in agriculture, and the consequent diminution in agricultural holdings, render-

ing fewer hands necessary, and the strong motives to their further reduction, supplied to the employers of labour by the Poor-Law Assessment prior to the late Union Chargeability Act.\*

Whatever may be the causes assigned, the fact of the rapid increase of the town population is indisputable. Meanwhile, the towns, wholly unprepared to receive these vast accessions, have crowded them down on the old population, or found unhealthy quarters for them in those room tenements which have been described so fully and painfully in the Eighth Report of the Medical Officer of the Privy Council, "On the Housing of the Poor in Towns," by Dr. Hunter. The consequences of this state of things have been forcibly set forth, in a paper in the *Social Science Transactions* of 1866, by T. E. Morgan, M.D., "On the Deterioration of Race in Great Cities." He has shown that the sources from which the cities are recruited are the natives of the healthiest divisions of the English counties, who may be regarded in the mass as picked lives; that the counties which fostered them in their youth receive no equivalent for this constant drain, and are diminished in their strength in proportion, and that the stream of yearly immigration into London in particular, is so large as to justify the assumption that it contributes in no small degree to maintain that favourable standard of health which has long characterised the metropolitan returns. The causes and progress of the physical deterioration of the masses thus received into the towns, and the extent to which those influences are undermining the vitality of the nation, are entered upon at length in that paper, which was based upon a large experience, gathered from the disease returns of one of the largest centres of our population. It concludes with valuable suggestions relating to street ventilation, isolation of the first cases of epidemic infection, inquiries into returns of disease as supplementary to and of equal importance with the registration of deaths, and other

\* For the process of this change, and the description of the exclusiveness of the close villages, and the sanitary horrors of the open villages for those who remain, see Dr. Hunter's Report on the Dwellings of Rural Labourers, 7th Report Public Health. "Migration to the Towns, or rather, expulsion from the Villages set in in 1837." *Ibid.* p. 230.

matters of sanitary prevention which, from the want of an efficient sanitary staff in the towns, are usually neglected. With the country thus giving up its best blood to the towns, and the towns quickly corrupting and consuming it, what can follow but an ultimate deterioration of the population? Already the sanitary and moral conditions of the towns which are yearly adding thousands upon thousands to their teeming numbers, are becoming a subject of anxious and even fearful contemplation to those who know from past experience how closely these conditions are combined in a mutual relation of cause and effect. Meanwhile, Divine Providence vindicates the violation of its own natural laws by special visitations. "All analogy," says Dr. Farr, "proves that no extensive or permanent degeneration of a race can be accomplished in less than two or three generations. The great change is as slow and insidious as it is certain. It is rarely perceived by its victims, who remain rooted and benumbed on the spot, unless they and the community are aroused by sudden and terrific catastrophes. Wherever the human race, yielding to ignorance, indolence, or accident, is in such a situation as to be liable to lose its strength, courage, and lofty emotions, the plague, fever, or cholera comes, not committing havoc perpetually, but turning men to destruction and then suddenly ceasing that they may consider." (Cholera Report of 1852.)

With this handwriting, "Deterioration of Race," shining on the wall of the not distant future, the health of cities becomes a matter rising above the sphere of local administration, and enters into the province of imperial care and control. Unfortunately, the mind of the country does not appear to have yet apprehended the full dimensions of the danger. Sanitary legislation, hitherto, has been chiefly permissive; that is to say, it permits local authorities to act or not to act as they please, and its execution is entrusted to those who, from a variety of motives, are too often more active in opposition than in action. Towns should not be permitted to deal as they please with the health and lives of their inhabitants. The health of the nation is a God-given trust, and the charge should be sacredly observed by the



country at large. Formerly, there may have been some excuse for our inattention. Now, potent agencies, once occult, have been exposed to the view of medical science, and a formidable number of diseases, all impoverishing the blood and reducing the strength of multitudes, is annually traced home to impure water, bad drainage, and foul air. In short, man may almost be said to hold in his own hands the means of prevention and safety; but, without the direct and active interest of the Government, the gift which this knowledge confers is nearly useless to the community, to that large portion of it at least who cannot help themselves. It has been well observed, "no medical man can have paid attention to the sanitary condition of the dwellings of the poor, without knowing that upon various sanitary circumstances their length of life and power of bringing up children depend. There is nothing more certain in medical knowledge than that. The ratepayers who will not have their places in a good sanitary state pay for this disease and premature loss of life. Society at large pays for a greater amount of pauperism and ill-health, and the interest of every individual in the community is bound up with the welfare of the poorest. There are some things which men ought to do for themselves; they ought to be industrious and be good citizens personally, but there are other things which individuals, especially those who live from hand to mouth by their daily labour, cannot by any possibility do for themselves, and which can only be done by the community in some form; and it is simply a want of political wisdom which hinders Government from taking a truly liberal view of their liabilities in that direction. It is all but impossible for the poor who live by daily labour, to effect the combinations which alone can produce a sound sanitary condition of the people." (H. W. Acland, M.D., F.R.S. Minutes of Evidence, 1865.) How those liabilities have been discharged hitherto is best learnt from another competent authority. "The state of matters," says Dr. A. P. Stewart, in 1867, "is in most parts of the country almost incredible. After eighteen years of legislation in these matters, we are, as regards the greater portion of the country, nearly without any sanitary organization whatever. The plan the Government



have hitherto adopted is this ; to make laws and to throw them out on the country, saying, ‘ There they are, obey them or not, as you please ; we will not trouble ourselves to inquire whether you do or not.’ This is precisely what is being done now. They have passed laws in many respects admirable, and said it would be a proper and right thing to obey them, but they have never inquired for eighteen long years whether they were obeyed or no. In some few instances you will find information in blue books, of very great interest, but if you want to know how the Public Health Act and the Nuisances Removal Act, and others of the kind, are being actually obeyed through the country, you have no means of ascertaining these matters.”

How long is this state of things to last, and when will the reproach of their unsanitary conditions and destruction of human life be rolled away from the cities of England ?

## II.

### THE HEALTH OF TOWNS.

DR. FARR, in his report of 1852, represents the cholera as a visitation sent to warn mankind against the ever active causes tending to deterioration of their race, and to lead them to consider. Since that year more than one-half of the lifetime of one out of the three generations, the term assigned by the writer for the accomplishment of the physical decline of a nation, has passed away, and there have been in that interval two more visitations. Have their teachings yet led us to consider? The annual loss of more than a fourth of the total number of 500,000 on the bills of mortality from causes which medical science and common experience have shown to be preventable, and the yearly recurring destruction of 20,000 of that number from diseases of which filth has been pronounced to be the specific medium of their propagation, is the only answer that can be returned to the inquiry.

This is a melancholy retrospect for the great and pressing cause of Sanitary Reform. What has legislation done in the interval?

"Our sanitary legislation," says Dr. Lankester (*Address on Health, Social Science Transactions of 1865*), "has been slow, and its action has been by fits and starts, as now and then the public mind has been alarmed, and the legislative mind has sympathised with it, but we no sooner improve than we go back again. Our legislature lacks earnestness. All our Acts are so constituted that they may be defied with impunity. They give the power of action to those who are either interested in maintaining sanitary abuse, or are ignorant of the dangers which arise from their toleration. If they could be made to see that disease and death are the most costly luxuries in which man can indulge, they would give more scope to the action of their medical officers of health."

An active motive power, adequate to the wants of the age, and fitted to cope with its retro-active tendencies, appears to be somewhere wanting. Her Majesty's Privy Council, by means of the high medical ability at their

command, have accumulated valuable stores of information on the causes and characteristics of the diseases which affect the public health, and have brought us, it is said, to the eve of great discoveries in respect to the causation of disease. Any great derangement of the health of the community, and any marked local outbreak of disease, are carefully investigated, and each year adds to the mass of important facts brought together for the information of those who care to profit by them. But the Council only exercise the function of advising. If recalcitrant communities refuse attention and compliance, their action is stopped at the threshold, except in those great epidemical crises which leave no time for wise prevention. Their chief medical adviser, in expressing his opinion strongly in the year 1858, that it should be made obligatory on the authorities to appoint permanent officers of health, adds :

“There is a fatal misapprehension in many minds as to the time when epidemic disease is present ; too commonly it is unknown or forgotten that just at such a time they are least able to do good. The local conditions which favor epidemic visitations are conditions which for the most part it takes time to create, and which it always takes time to remove. The death-rates of certain ordinary diseases measure these local conditions, and predict where are the sure places for epidemic mortality to fall. It is in the interval between epidemic periods that measures may be taken, which, while they reduce these ordinary death-rates, give security against the dreaded invasions. It is the ordinary, not the exceptional, health of districts which most calls for sanitary reform.”

Mr. Simon, after commenting on the 50,000 of the adult population who fall victims annually to pulmonary phthisis in England alone, and on the high local mortality of children, both indicating a high local prevalence of those causes which determine a progressive deterioration of race, adds : “These questions are not uninteresting to the ratepayers of places where high local rates prevail. For, sanitary neglect is mistaken parsimony. Nor, probably, will such questions appear unimportant to the public economist. For the physical strength of a nation is no mean part of its prosperity” (Report of the General Board of Health, 1858.) Local administrative bodies, constituted as they are, seldom anticipate or look beyond the actual emergency. It was with no little surprise that the visitors to Birmingham at the late Social Science gathering learnt that that great and important town

possessed no medical officer of health, to collect and bring into one focus its sanitary statistics, and that with great natural advantages, it had been living on the reputation of a death-rate, which, when applied to the several component parts of its large population, did not bear the test of examination. A necessity, therefore, presents itself for some more steady, close, continuous, and authoritative direction and supervision of the national health than the existing system admits of. It may be urged that the community is itself able and bound to cope with these evils, but how? The easy and well-to-do answer, as it has very recently been answered, "by education." Even the medical officer himself seems to favour this notion, when he says in the same report, with reference to the discontinuance of the coercive power of the Public Health Act of 1848, "If it be a well-founded opinion that I have ventured to express that the sanitary progress of localities is almost an educational matter (wherein enlightenment counts for more than compulsion), the resignation of that power is no loss to the objects in view." Yet he deviates from that maxim in recommending the compulsory appointment of health officers, and in a preceding page he depicts places "respecting which it may be with truth said, that vice and ignorance and brutality are among their active causes of disease. From the first moment of my personal intimacy with such places till now, my assurance has grown stronger and stronger, that it is much more difficult than the wealthy and powerful can imagine, for those who are born and bred in courts which are nurseries of cholera, typhus, and scrofula, to emerge from their wretched childhood otherwise than vicious and ignorant and brutal." Who, then, it may be asked, will send down a plummet into these depths? Who will educate sanitarily our educated? Who will instruct our instructors? If instruction fails, will the efforts of the ministers of religion succeed? Hear the answer:—"The vicar of Brompton," says Mr. George Godwin, F.R.S., "writes to me what dozens of hard-worked clergymen to whom I have put the question have replied: 'It is literally impossible for the clergy to raise the condition of the population in these overcrowded places.' "I ask," says the Bishop of Ripon, "if all the

labour of parochial clergy and city missionaries be not thrown away upon a population so circumstanced? Does not the same state of things go on from year to year? Is there any moral improvement in the mass, so long as the physical condition is unchanged? I have put the question to men who have faithfully toiled for years in these dens of London, and the answer is invariably the same: 'No general impression is made.'

Towns have yet to learn the lesson read to them by high professional authority, that "hundreds of thousands of houses are in such a defective sanitary state that it is impossible for the inmates to enjoy health. Philanthropy and benevolence work in vain, surrounded by subsoil and surface filth and foul air. Workhouses, hospitals, gaols, reformatories, and schools perform the task of Sisyphus, until a base of cleanliness has been established." And another authority tells us "We fill our gaols with felons, and we have city missions, and put our trust in education; but the influences of filth are stronger than the policeman, the schoolmaster, and the preacher; and we ought, by this time, to have learned that the very foundation of moral training in a tenement is a pipe of wholesome water from the top of the house to the bottom."



### III.

#### THE HEALTH OF TOWNS.

THE General Board of Health, in the year 1854, reported the deaths from preventable diseases in England and Wales to be upwards of 170,000, of which by far the larger proportion of those who survived their fifth year, perished at the adult period of their life, chiefly from various forms of fever, one effect of this destruction of the heads of families, precisely at the time when they have the greatest number of young children to maintain, being to produce and keep up a state of pauperism. How to deal with this startling fact has become a question of the deepest importance to the country generally, and especially to the metropolis, and the difficulty is enhanced by the circumstance that no assistance towards its solution can be expected from that class of the sufferers who are the first recipients and propagators of the maladies affecting the public health. The Board observe, "In districts which are the seats of the most devastating diseases, no evidence has yet arisen to warrant the presumption that the most successful examples will lead to the spontaneous adoption of combined and efficient measures of prevention. Experience has shown that it is fallacious to conclude that all is well when there is no complaint. Among the population living in the lowest physical degradation, under circumstances which would be commonly deemed insupportable, we have met with scarcely one instance of complaint originating with the sufferers themselves; they are sunk too low to be conscious of their condition."

Nothing but the compulsory action of some stringent sanitary law, whenever society may awake to the necessity of providing for its own security, will be of avail to reach this, the lowest deep of all; a law so devised as to extend to those who profit

by these terrible blots, rather than to the victims of them. Next come the workers for their daily bread, whose ailments swell the vast amount of the nation's sickness to the extent of one half of the sickness of the town populations. It has long ago been shown that the existing connection between their medical relief and the Poor-law administration keeps open a door, through which other relief creeps in, and is continually drawing the labouring classes within the pale of pauperism (Evidence, Medical Poor Relief Inquiry, 1844). The degree of acquaintance with the conditions of the masses possessed by the classes above them, and their consequent ability to deal with these evils is not favourably described: "The middle class, and even the local authorities," say the Board, after citing instances drawn from two of our chief towns, "are in general entirely ignorant of the quarters occupied by the poor. Towns, as well as classes which are acquainted with no other standard of health than their own, are often no better informed on this subject than the poorest portion of the population. It is not from within, but from without, that an approximation has been obtained to the true condition of the great mass of the population, and we are warranted by experience in stating that arrangements for the improvement of the public health on any other basis than an aggressive one against the physical causes of disease, will not only prevent the completion of what has been commenced, but will counteract much of what has been already effected."

Since 1854 a stride onwards has been taken, and where competent medical officers of health have been appointed on an independent footing, and free from the short-sighted influences of the ratepaying interest, much of this darkness has been dispersed, and the several classes have been led to take a more just view of their mutual dependence and obligations. Where they have not been appointed, or where they are fettered by circumstances, the remark of the general board will hold good for the present time. The description, in 1867, of the existing state of things is not encouraging:—

"The result, then, of eighteen years of sanitary legislation is that we have in the metropolis a large staff of able and active, but underpaid, officers of



health, whose recommendations may be adopted and enforced, or passed by in silence, or rejected with contempt; that the great majority of towns throughout the kingdom have no medical officers of health, and that, in those which have them, their remuneration is, with three or four exceptions, shamefully inadequate; and that their position of dependence on the local authorities is such as often to make them comparatively powerless for good, especially when, as sometimes happen, the authorities are interested in the perpetuation of the abuses which their sanitary officers seek to remove" (Medical and Legal Aspects of Sanitary Reform, p. 76).

Hull, with its population of 122,000 does not yet possess a Medical Officer of Health. Sheffield, Bradford, and Newcastle, "one of the worst hot-beds of epidemics," are also without one. In Birmingham, where the Press and the medical faculty were unanimous in urging the appointment, the Corporation, in 1868, "were deliberating before adopting the *expensive system* of a Health Officer" (Transactions p. 481), and have not yet appointed one. The population of these five towns, in 1868, stood at 967,000. The appointment of one in Leeds, "one of the dirtiest towns in the kingdom" (Dr. A. P. Stewart—Transactions of 1868), is of very recent date. Manchester, with its admirable water supply (Minutes of Evidence, 1869), and its 50,000 ash-pits (Journal of Science for April, 1867) and its character of being "one of the least healthy towns in the kingdom," only appointed one in the past year. Bristol, "from some timorous reason of policy" (Public Health Report of 1867, p. 64), does not allow its Health Officer, "the best of medical inspectors," his proper designation. In Liverpool, with its hideous overcrowding, the work altogether outstrips the utmost efforts of its able staff (Transactions of 1866.) These towns are on the list of the 14 great towns of the kingdom, and smaller townships look to them for example and guidance.

There is an annual excess of 32,735 deaths over and above the normal healthy standard, in thirty large town districts alone (Supplement 25th Report of Registrar General), which represents the penalty paid by the country for the unfavourable sanitary condition in which the people of those districts live and die. Well might the Registrar General, in view of these things, exclaim in his latest report:—"There is still something radically wrong in the sanitary administration of the towns of the kingdom. The root of the evil has not been reached.

Vast numbers of the population, increasing every year, are blighted by causes which science has discovered, and which hygienic regulations might control." Well, too, might the experienced officer, to whose papers place has been given in the 28th and 29th Reports, add his testimony as follows:—"It is in such districts that, when an epidemic breaks out, it finds its greatest number of victims. In maps, shaded in the ratio of mortality, the blackest tints cover these localities. But pestilence, once established, is not confined to these places; it spreads to better districts, and involves rich and poor in like disaster. All ranks of persons are vitally interested in the sanitary condition of their towns or villages; and upon all it rests as a sacred duty to assist in promoting so great and noble an enterprise."

#### IV.

### 'THE HEALTH OF TOWNS.

IN 1858 Parliament, yielding to the claim set up by the towns to independent and uncontrolled action in matters of the Public Health, shelved the General Board of Health, and, relinquishing any further effort for a general sanitary organization, passed the Local Government Act of that year. In so doing, the principle of governmental supervision of the National Health was abandoned, and the sanitary welfare of the nation was committed for the future to the local authorities. It was hoped, to use the words of the Registrar General, "that a generous rivalry in the race of improvement would develop itself in the cities, and that the municipal authorities would lay a solid foundation for the sanitary edifice by bringing pure water on the constant supply system to every house, and carrying away the dirt of cesspools, which is the source of zymotic disease, to fructify the soil, and that they would undertake, besides, the inspection of articles of food by health officers, and measures for the regulation of lodging-houses or of any of the houses in which fever is generated, and other duties connected with the same object." The General Board of Health, in their several Reports, and particularly in their Report of 1854, had placed on record a statement of the measures adopted and the work done by them during their tenure of office. Of the sanitary history of the towns since they undertook to discharge the weighty trust committed to them, we possess no similar collective record, and it is therefore, impossible to say how far the expectations expressed in the above extract have been fulfilled. Some particulars are, however, furnished from a return printed by order of the House of Commons, in April, 1866, shewing the "expense incurred for works of Sewerage, Water Supply,

Street Improvement, Public Pleasure Grounds, and other sanitary works, completed or in progress, under the Public Health Act of 1848 and the Local Government Act of 1858, and the total amount raised on account of such works on the security of the rates." The return is very imperfect. Many towns and boroughs, then under those Acts, do not appear to have responded to the call, or had no return to make, and it does not include the townships managed under separate Acts, such as Birmingham and others. Only 125 out of the 580 cities, boroughs, and towns borne on the official Census Tables of England and Wales for the year 1861, appear in the return of 1866, but, imperfect as it is, it yields some interesting information. The highest figures of expenditure in round numbers, above £20,000, are given as follows :—

| NAME.              | Population<br>of 1861. | Total Ex-<br>penditure.<br>£ | Main<br>Drainage.<br>£ | Water<br>Supply:<br>£ |
|--------------------|------------------------|------------------------------|------------------------|-----------------------|
| Bolton .....       | 70,000                 | 97,000                       | 38,108                 | 26,420                |
| Barnsley .....     | 17,000                 | 76,900                       | 7,266                  | 65,000                |
| Carlisle .....     | 29,000                 | 101,610                      | 26,000                 | not stated            |
| Chorley .....      | 15,000                 | 29,000                       | 11,000                 | Do.                   |
| Hull .....         | 97,000                 | 55,000                       | 22,000                 | Do.                   |
| Leicester .....    | 68,000                 | 55,000                       | 16,000                 | 17,000                |
| Llanelly.....      | 11,000                 | 30,000                       | 6,500                  | 14,000                |
| Oldham .....       | 72,000                 | 75,000                       | 9,000                  | not stated            |
| Plymouth .....     | 62,000                 | 86,000                       | 30,000                 | Do.                   |
| Preston .....      | 82,000                 | 296,000                      | 49,000                 | 230,000               |
| Rugby .....        | 7,800                  | 27,000                       | 5,700                  | 19,000                |
| Salisbury .....    | 12,000                 | 31,000                       | 13,000                 | 14,000                |
| Staleybridge ..... | 24,000                 | 26,000                       | 6,000                  | 20,000                |
| Worcester .....    | 31,000                 | 53,000                       | 21,000                 | 30,000                |

Besides the above, 19 districts of minor importance figure for an expenditure of sums ranging from £10,000 to £20,000. The only large town in this second list is Nottingham, which, with its population of 74,000, figures only for an expenditure of £11,000 for Main Drainage. All the 125 town districts make a return for Main Drainage, at varying amounts from £3 upwards, and the same for Water Supply, from the sum of £28 expended "in repair of the public pumps at Calne" to the large outlay of £230,000 for this purpose at Preston.

A significant entry appears under Tamworth, viz. :—  
"No works of sewerage or water supply have as yet been commenced under the Local Government Act; plans

and estimates for the purpose were obtained, but a great clamour has been raised in the town against the proposed works, in consequence of which nothing has been done." Unfortunately for the health of Tamworth, the matter did not rest here. Twice the town crops up with unfavourable notices in the Reports of 1866-67, and in the Registrar General's last Quarterly Report of 1867 it is recorded:—"There has been much fever in the borough of Tamworth. The town is in a very bad state, abounding with nuisances, none of which are ever removed by the authorities. The mortality bears but a small proportion to the amount of sickness occasioned by the extremely filthy condition of the town." Tamworth appears again in the third Quarterly Report of 1868, with a death-rate enhanced two-fold, the chief losses, as is usual under these conditions, being of children under five years of age. Once more, Tamworth appeared about the same time in a paper read by Professor Alfred Hill, M.D., at the Birmingham Conference, with the following notice attached to it:—"In Tamworth, where the table shows the well-water to be excessively bad, disease is fearfully rife. One medical man informs me that, from 'his own knowledge, typhoid and diarrhœa are exceedingly prevalent,' that in one house where one of the above waters was used, 'he had about eighteen months ago ten cases of typhoid.' He adds, that there was considerable improvement in the health of those who were at the trouble to obtain pure water, and that he has 'always considered that the *endemics* of Tamworth were essentially due to drinking impure waters.'"

If Public Health be, as it has been declared to be, Public Wealth, "if these five words do, indeed, form an adage of momentous import and stern truth,"\* if it be true "that the gain of lives annually would pay ten times over the cost of all the exertions that might arise to secure them for life and for their country,"† then what has been the cost of Tamworth to the State and the community at large, and how many more Tamworths are there in the country?

\* Sir James Simpson, Bart., M.D., F.R.S., Address on Health, 1837.

† Edwin Lankester, M.D., F.R.S.



## V.

### THE HEALTH OF TOWNS.

“EVERY man who is obstructed by sickness from working his work and doing his duty as a citizen, is necessarily a loss to the revenues of the State at large. If we have a community of ten thousand, with one hundred sick, the wealth-producing power of this hundred is not only taken from the public purse, but ten or twenty citizens have to be told off to attend to them in their sickness, and during their term of illness the sustenance of the sick and their attendants is required to be obtained from public or private sources. But further, if from the severity of the disease five or ten adults—fathers and mothers—in this hundred die, the consequent loss to the community is difficult to calculate, as their children might require to be sustained, and the status of their families be deteriorated morally and materialy. It is impossible, indeed, to estimate in mere yellow gold the value of the life of a father, however humble a mechanic he may be, cut down prematurely by disease and death.”\*

Such being the value of lives to the nation, its aggregate losses can be better estimated by taking the annual mortality of the different diseases which rank as preventable. Cities have been declared to be “the graves of our population,” and it is chiefly amongst their increased and increasing numbers that the evidence will be found. 116,000 perished from preventable disease in England alone in 1866, a not unhealthy year. Out of this sum total consumption, “a town disease, the offspring of imperfect nutrition and impure air,” “a disease for prevention, and not for cure, and even when developed, more fitted for sanitary than for medical treatment,”

\* Sir James Simpson, Bart., M.D., F.R.S.

took 56,000 lives. Scarlatina and diphtheria, "both implying, when in excess, great defects in the conservancy," carried off 15,000. Typhus and typhoid, both "artificial diseases," and both rapidly on the increase—Typhus, the product of over-crowding and bad air, and manufactured "as easily as saucepans," and typhoid, the "emanation from putrid drains and decomposing animal matter placed in and around the dwellings of those attacked, and sustained by increasing contamination of the waters," took 21,000 more. Both forms of fever imply about 120,000 instances of the diseases in all, and both peculiarly affect those in the prime of life, the fathers of young families and the workers of the community. Nor are they confined to these classes, but they are found amongst all, in the best houses as well as in the second-rate dwellings, down to the worst. Endemic diarrhœa, "an incessant witness to the same deleterious influences," slew its 17,000. It is not without good cause that the medical officer of the Privy Council, in his Ninth Report exclaims, "The mere quantity "of this wasted life is something horrible to contemplate, "and the mode in which the waste is caused is surely "nothing less than shameful. It is to be hoped that as "the education of the country advances, this sort of "thing will come to an end; that so much preventable "death will not always be accepted as a fate; that for "a population to be thus poisoned by its own excrement, will some day be deemed ignominious and "intolerable."

The General Board of Health in their Report, dated in 1854, observe on the same subject:—

"The operation of excessive mortality caused by the frequent recurrence of ordinary epidemic diseases may thus be illustrated. Excessive mortality prevalent in any town or district is preceded by excessive sickness, there being numerous cases of sickness to one death. The wide-spread sickness, when not proving fatal in a few days or weeks, does so to a vast extent in the course of a few years, by producing slow disease in some vital organ, without leaving a single intervening day of real health or good working ability. Even when such sickness is not sufficiently acute to produce organic disease, it causes a state of depression. The evils, moral, social, and political, resulting from the extensive prevalence of such a state, are of greater magnitude even than those directly caused by the excess of rapidly fatal disease. But this state of depression is the normal condition of the great majority of the residents in all unhealthy districts and dwellings. The offspring of people in this enfeebled condition are puny and sickly; one-half of the children they produce perish



before they reach the fifth year of age; very few of those who survive attain a healthy, strong, and vigorous manhood; the entire generation is swept away at the average age, for each individual, of twenty-nine years at most; the children born of this short-lived race are still more enfeebled than their parents, and the physical deterioration goes on increasing with each successive generation. The examination of the birth-places of residents in unhealthy districts demonstrates that the population of these localities could not be maintained, were it not for immigration of robust labourers from less unhealthy and general rural districts. On comparing the workmen born and bred in these unhealthy districts with their parents who came from more healthy districts, it is found that the descendants are lower in stature, less muscular, and less capable of labour. To such a degree does this deterioration shorten life that in these districts it is difficult after a few years to trace the descendants of the original inhabitants. There have been periods in the history of our own country when the like deterioration of the population has been produced by war, but the physical deterioration caused by constant residence under unhealthy conditions is more powerful and more constant than that produced by the most devastating wars."

"Who (asks Dr. Farr), will deliver the nation from "these terrible enemies? Who will confer on the inhabitants of the United Kingdom the blessings of "health and long life? Who will give scope to the improvement of the English race, so that all its fine "qualities may be developed to their full extent under "favourable circumstances? His conquests would be "wrought, neither by wrong nor human slaughter, but "by the application of the powers of human nature to "the improvement of mankind."

Nine years have elapsed since the question was asked, and no response has yet been made. The subject of the conservancy of the National Health, in Parliament, takes the form of a legislation either unworkable from its inherent defects,\* or unworked, because there is no agency to enforce its provisions. The principle of governmental or national supervision of the Public Health has been thrown overboard in favour of the proverbially shortsighted ratepaying element in the towns, and the duties connected with it which the interests of society require to be made obligatory and to be regarded as a sacred trust have been left permissive. Lastly, the directorial power reserved to the Privy Council can only be exercised on special occasions or in periods of national alarm, when too late for prevention; or, if it take the form of preventive

\* Public Health Journal, Jan., 1868, p. 15.

counsels, it is liable to rough and ostentatious rejection from local authorities.\*

Permissive legislation has been described as little better than legislative "hinting," and the Medical officer of the Privy Council, in the last or Eleventh Report, observes "everyone knows how valueless such legislation has been in the greater part of the hitherto province of sanitary law, even as regards objects of foremost necessity to the Public Health; so valueless, that in all chief respects compulsory legislation has always had to be substituted for it." The same authority, in a review of the laws and administrative agencies which concern the Public Health, observes, p. 20, "the principles now affirmed in our statute-book are such as, if carried into full effect, would soon reduce to quite insignificant amount our present very large proportions of preventable disease. It is the almost completely expressed intention of our law that all such states of property, and all such modes of personal action or inaction, as may be of danger to the Public Health, should be brought within scope of summary procedure and prevention. Large powers have been given to local authorities, and numerous obligations have been expressly imposed on them. If, however, we turn from contemplating the intentions of the Legislature to consider the degree in which they are realized, the contrast is curiously great. Not only have permissive enactments remained, for the most part, unapplied in places where their application has been desirable, not only have various optional constructions and organizations which would have conduced to physical well-being, and which such enactments were designed to facilitate, remained in an immense majority of cases unbegun; but even nuisances which the law imperatively declares intolerable have on an enormous scale, been suffered to continue; while diseases which mainly represent the inoperativeness of nuisance laws have still been occasioning, I believe, fully a fourth part of the entire mortality of the country. And when inquiry is made into the meaning of this unprogressiveness in reforms intended and in great part commanded by the Legisla-

\* See Manchester Guardian, August 6th, 1868.

ture, the explanation is not far to seek. Its essence is in the form, or perhaps I may rather say the formlessness of the law. No doubt there are here and there other faults. But the essential fault is that laws which ought to be in the utmost possible degree simple, coherent and intelligible, are often, in nearly the utmost possible degree complex, disjointed and obscure. Authorities and persons wishing to give them effect may often find almost insuperable difficulties in their way ; and authorities and persons with contrary disposition can scarcely fail to find excuse or impunity for any amount of malfeasance or evasion." The Medical officer concludes his Report with a variety of valuable remarks and important suggestions for future legislative and administrative action.

## VI.

### THE HEALTH OF TOWNS.

THE Medical Officer of the Privy Council in his Ninth Report expresses a hope that the waste of human life occasioned by the neglect of Sanitary Laws will come to an end as education advances, and the Medical Officer of the City of London in his Report for 1861, after enumerating the causes of unhealthiness, viz., dense overcrowding, living in houses unfit for human habitation, the close and ill-ventilated state of the courts and alleys, the systematic neglect of cleanliness among the poor, and their living continually in an atmosphere of decomposition, insists on such teaching as an obligation of society, "for it is perceived that the evils of such "ignorance "are not confined to the poor alone. They "spread among the rich, and largely affect the interests "of all."

It is obvious that the teaching, thus inculcated, in order to be of use, must begin with the grades where it is most wanted, and of these we possess a sketch drawn by a powerful hand :—

"The master evil which nullifies every effort for the benefit of the working people, which leaves us no rest, tho' evil that embraces and intensifies all the others, the hot-bed of pauperism, immorality, disease, and drunkenness—drunkenness alternately the cause and consequence of disease, the evil that is negative in preventing every improvement, and positive in maturing every mischief; that lies at the root of nineteen-twentieths of the corruptions that beset our social state, and forms the crowning abomination of the whole, is the domiciliary condition of many thousands of our people. But we must look not only to the pestilential character of the actual dwellings, but to the unventilated, fever-breeding localities in which they stand; tho' dark, damp, and narrow alleys never visited by a ray of the sun, or a breath of fresh air. To describe these things is impossible. They must be seen, smelt, tasted in person. Dirt and disrepair, such as ordinary folks can form no notion of; darkness that may be felt; odours that may be handled; faintness that can hardly be resisted, hold despotic rule in these dens of despair."—(Opening Address of the Earl of Shaftesbury, Social Science Association Meeting of 1866).

To this evidence other testimonies to the same effect may be added :—



"The breath of man is fatal to his fellows; more than that, it is fatal to himself. It is now well known that there are certain diseases of which the very essence is filth,—diseases which take no hold except where putrescible air or contaminated water affords means for their subsistence; and of these diseases tens of thousands die. Typhus fever, the disease of the prime of life, has its source especially in such impurity of air as is produced by overcrowding, and is a constant cause of death, misery, and pauperism. We have ague where we do not drain; we have fever where we overcrowd. The money loss through typhus fever alone, during the last twenty years, would have to be stated in millions. Even if death do not result, a low state of health becomes the rule. I say, speaking literally, that thousands in this country are only half alive, have never lived, and never either work or play with whole life. A low state of health becomes chronic: they exist, they do not live. An epidemic finds among them its ready victims."—(George Godwin, F.R.S., Transactions of 1864). "Remember this, there must be a condition of public health favourable to the diffusion of disease before it spreads to any great extent, and it depends much on the condition of the population, and the sanitary regulations that prevail, whether that disease will or will not sweep away thousands from the town or locality in which it springs up."—(Infant Mortality, by W. D. Husband, F.R.C.S., *Ibid*).

And yet few, comparatively, live in dirt by choice. In a paper read by Mr. Henry Roberts, F.S.A., before the same association in 1862, the opinion of an able and experienced physician who had had many opportunities of studying the poor of London is quoted, as follows:—"My own impression is, and I say it on due consideration, and with every possible regard of truth, the poor make very great sacrifices in the cause of cleanliness. They constantly aim at it and constantly fail, because it is impossible." The Commissioners of Inquiry into the Health of Towns in their Second Report, A.D. 1845, bear similar testimony. Adverting to the common allegation that it is useless to improve the houses inhabited by the poorer classes, because they would soon recur to their former condition, they observe, "These allegations have probably been drawn from the fact of such large numbers of the poorer classes being found to exist in their present miserable abodes, where they are obliged to tolerate the scenes of filth around them to which they become inured by habit, and continue to live among, from the difficulty of finding better residences. It is certain, that under such circumstances, better habits cannot be acquired, nor, if in existence, are they likely to be retained. It cannot be denied that the poorer classes would most readily appreciate any improvement which affords the means

“of speedily removing the present accumulations of filth  
 “from the vicinity of their houses, and which would free  
 “them from their injurious consequences. Such amelioration of their dwellings by improving their health,  
 “and enabling them to follow their employments with  
 “fewer interruptions from sickness, would also increase  
 “the means at their disposal for paying the rents, and  
 “meeting the demands upon them.”

Dr. Morgan observes in a paper read at Oxford in 1868, “There should be no waste, no useless expenditure of human life. We are bound to see that as our  
 “toiling artizans are amassing for us vast stores of  
 “national wealth, as they are earning this wealth by  
 “labouring at manufactures and trades which, in not a  
 “few instances, prove sorely detrimental to their health,  
 “so we also must fulfil our duty towards them, and  
 “take care that when they are assembled in the towns,  
 “they shall obtain that amount of shelter and breathing  
 “room which is indispensable to human beings, if they  
 “are to enjoy health themselves and not to endanger  
 “the safety of their neighbours.”

Such, then, being the field of teaching, who, it may be asked, are to be the teachers? Certainly not the holders of house property, who are described in the above Report of 1861, as “nullifying the efforts of Sanitary Improvement by passive resistance.” “There  
 “is a large class of property to which the owners will  
 “not do anything. ‘Them as does repairs, does it for  
 “themselves’ was the answer of one of these gentlemen.”—(Public Health Journal). “Cottage owners,” Mr. Rawlinson says (Transactions of 1862), “oppose  
 “the introduction of house drainage, because they will  
 “feel the first cost, and doubt as to any ultimate pecuniary benefit to themselves. The presence of fever  
 “and of general sickness amongst the tenants of their  
 “property is considered a matter of course.” But the most unimpressible of all others among a class whose extreme rights are found everywhere with, too often, a disregard of their corresponding duties, are the respectable owners of bad property. In a valuable essay on the Homes of the Working Classes, by J. Hole, p. 117, the author observes, “Even the owners of the

“worst description of cottage property know little of it,  
 “as they draw their rents through agents, and moreover  
 “have their perceptions blinded and their feelings  
 “blunted, almost unconsciously, by pecuniary con-  
 “siderations. The respectable citizen, who draws high  
 “per centages in the shape of rent, never comes in  
 “contact with the horrid misery, from whose stunted  
 “resources the rent is squeezed; never thinks of the  
 “anxious daily battle of life amid filth and fever, from  
 “whence his wealth is drawn. It is easy to ascertain  
 “this by experiment. Traverse the courts and alleys,  
 “and the sight of your respectable coat will soon bring  
 “out some of the inhabitants, and it will be found that  
 “they only know their pot-landlord, *i. e.* the agent, and  
 “perhaps either never knew, or have forgotten the name  
 “of the real owner.” Another authority observes,  
 “Proprietors of old houses, in order to avoid coming in  
 “contact with the tenants, very frequently place them  
 “in the hands of factors, who have no interest in the  
 “tenants, and take no trouble farther than to exact the  
 “last penny that can be got from them, without much  
 “respect to the accommodation provided.” (Provost  
 Lyndsay, Transactions of 1863).

Long prior to the present time, the same evils arrested  
 the attention of those who were competent to pronounce  
 on them. “I may confidently appeal to professional  
 “men, whether they ever witness fevers or other diseases  
 “assuming, elsewhere, anything approaching to the  
 “malignant and fatal character which too often marks  
 “their progress amongst the poor. Much is doubtless  
 “referable to the superior comforts and precaution of  
 “the one class, in contradistinction to the privations and  
 “neglect of the other. At the same time, I am con-  
 “vinced that the magnitude of the mischief is traceable  
 “to causes, not inherently or essentially attaching to  
 “the poor, *quasi* poor, but to their needless exposure to  
 “many noxious and positive influences, internal and  
 “external to their habitations, which admit of ready  
 “correction or removal.\* I allude, in particular, to

\* There is much quiet pathos in the following extract from the Report of  
 the Commissioners of Inquiry, A.D. 1845. “The family of E. S. inhabited  
 an underground kitchen. The evidence of the mother of the family was as



“those previously enumerated:—defective drainage; imperfect ventilation; crowded and badly constructed dwellings; and want of cleanliness—the latter being connected with the absence of proper supplies of water. And why, let me ask, should persons be allowed to erect human habitations, in situation and in construction, so palpably at variance with every principle of health or convenience? What right has any man to crowd human beings, poor though they be, into a space utterly incompatible with wholesome, not to say comfortable existence? Upon what grounds does any one presume to confine this less fortunate portion of his species within limits infinitely too small, and obviously insufficient, for the maintenance of the healthy functions of vitality? What avail public generosity and private benevolence, our hospitals and dispensaries, if their funds are to be expended, and their wards are to be peopled with the inmates of these dens and hovels of infection? It is sacrificing the charity of the many, to the cupidity and recklessness of the few; it is catering for the victims of a sordid and unprincipled speculation.” (W. Kay, M.D., Second Report of Commissioners of Inquiry, 1845). These descriptions will be found applicable in many places, not only to the “cottage owners” and “respectable citizens,” but to the rich and powerful who would rest ill in their beds, if they were willing and able to pay an Asmodeus-like visit to some of their town property.

“The fact is,” Mr. Hole observes, “not that the public are indifferent, but that they are ignorant. The fearful condition of great portions of our large towns would not be tolerated, were it adequately understood. These evils have so long a life because the

follows:—Qu. How long have you resided here? A. Nearly two years. Qu. Have you enjoyed good health since then? A. No, all our troubles have come on us here. I used to be strong and lusty and able to work; but now I am weak and sickly. I have had many children, and never suffered from my confinements till I came to this place; but since then I have had two dead born children. But what distresses me so much is that my children who were healthy before, are becoming very puny; and my husband is not able for the work he used to do. God has dealt hardly with us for two years.”

“middle and upper classes have no personal, concrete knowledge of them, but only some dim abstract idea, gathered from newspapers and speeches, that things are not quite as they should be.”

Those who should, from their position, stand in the place of the teachers and protectors of their tenants, thus failing, will their official protectors do better? Immense powers for good and evil have been lodged unreservedly in their hands, and they may fairly be said to hold in them the issues of health or disease, life or death, for the population of their towns. The response is not a favourable one. From the ranks of society where the rate-paying interest is predominant, and where all sanitary amelioration is viewed through the spectacles of present expense, effectual remedies are difficult of obtainment. “The great obstacle to the efficiency of our sanitary legislation lies in the fact that the Town Councils in boroughs, and the Poor Law Guardians in other places, constitute ex-officio the Local Board of Health. The members of these bodies are chosen by popular vote by electioneering means without any reference to sanitary qualifications, and too often on grounds which are precisely such as ought to have rendered them ineligible.” (Dr. R. Elliot of Carlisle. Transactions of 1867). “The local authorities are more or less unlearned, and for that reason require plain and special directions. They are interested in diminishing the rates, unmindful of the probable costliness of their parsimony, and they are, therefore, frequently unwilling to act in sanitary matters, except under compulsion. They are often ignorant of the importance of sanitary precautions, and indifferent to flagrant nuisances, and to the serious consequences arising therefrom to individuals, to others beyond the offending district, and to society at large.” (Extract of a Memorial presented to the President of the Privy Council by the Council of the National Association. Transactions of 1866). The memorial concludes with the recommendation that as permissive enactments are generally taken to be permission not to act, their most useful provisions should be made peremptory, and that as the inefficiency in the

administration of the Health Laws by the local authorities was due partly to the absence of a central power, such power should be established.

Another fact, in itself productive of much mischief, is glanced at by Dr. Elliot. "In most communities there was a prejudice against the disclosure of facts which tended to place the town in an invidious light." "Short-sighted persons," says another authority, H. W. Rumsey, M.D. (State Medicine, p. 119), "suppose that the value of property and the success of trade, in their respective neighbourhoods, depend on the concealment of such facts. They hastily assume that local interests may be injured by unwelcome disclosures, forgetting that sound measures of medical police, based on impartial inquiry, are particularly calculated to improve every legitimate source of income, and to promote all just and right investments of capital. But let us hope that the objectors are in a miserable minority. Happily, the moralist, the philanthropist, and the political economist, are agreed that the permanent prosperity, collective and individual, of any community depends on an open and fearless exposure of whatever circumstances tend to deteriorate the physical condition, and to impair the vital force of those who compose it." When such a feeling gathers strength in a community unwilling to undertake the necessary sanitary reforms, it will find its expression in an incessant and uneasy desire "to make things pleasant." Vain eulogy will take the place of honest endeavour, and the hard facts which present themselves from time to time, will be smoothed away, frequently at the sacrifice of the public health.

Such are but a few leaves from the tree from which a number of testimonies to the same effect might be largely gathered. It may be urged that this is an unjust representation of corporate bodies in the mass. Exceptions, no doubt, there are, not a few and bright ones, of those who have been wise in time, and trimmed their lamps or done their best to do so, and who have derived, thereby, present profit and the satisfaction of a good conscience. The ninth volume of the Reports of the Medical Member of the Privy Council has shown

how the lives and happiness of the dwellers in towns\* have been extended and improved by wise expenditure for sanitary objects, and the list already given tells us what other places have done or are doing. The great centres of commerce and population, with their large means and equally large difficulties stand on a footing of their own, and "have effected the accomplishment "of some really great undertakings," but very much remains to be done. Leeds and Liverpool have been painted in gloomy colours in the 7th and 8th Reports on the Public Health. The Sheffield volume of the Transactions contains an unfavourable report on the state of its streams, and the Manchester and Birmingham volumes report unfavourably on the health and conservancy of those towns. The Registrar General supplies the latest comment in his 29th Report, viz.—

"While the average mortality in the 14 great towns was at the annual rate "of 26 deaths in 1000 living, it was 21 in Bristol, 21 in Birmingham, 25 in "London, 29 in Liverpool, 31 in Manchester, 33 in Salford, 28 in Bradford, 32 "in Leeds, 29 in Edinburgh, 33 in Glasgow. When will the North undertake "the noble work of saving the lives of the people? Why should industrious "prosperous, and wealthy communities see their people perish year after year at "these appalling rates without trying some radical and effectual measures of "reform? This is not a question of mere opinion, but of life and death; it is "not a question of the day only, but of all time. Shall the town breeds of the "North degenerate and die out, or improve and live? There appear to be dis- "putes as to the particular measures to be adopted: why should not experiments "be at once made in various blocks of houses? The water supply is an ex- "cellent preliminary, but the sewers must follow. The refuse must be day by "day removed from the dwellings, and this the householder cannot himself "accomplish in large towns. It is municipal work."—Quarterly Report of Registrar-General, 4th Quarter of 1868.†

\* Namely, a list of 25 towns from Bristol to Worthing, with a statement in detail of the results of the works undertaken for the promotion of the public health.

† NOTE.—These death rates are probably not intended by the Registrar General to be received otherwise than as a distant approximation to the reality. It was observed by Dr. Farr, when speaking of the prevalence of diarrhoea and typhoid in Birmingham, in connexion with the large use of its well water, (Transactions of 1868, p. 502) "I may here mention that the mortality of a large portion of Birmingham is very high. It is not 24 per 1000, but 27 per 1000 in the old Borough, though it is reduced by taking in Aston, where the mortality is 21 per 1000. In Kings Norton, including Edgbaston, it is only 17 per 1000. If, therefore, you mix these elements together to get the municipal borough, you obtain a comparatively low rate of mortality, but if on the contrary you take Birmingham proper, where the great mass of population reside, you get a very high rate of mortality." The same observation applies to Bristol, which comprehends in the death rate of its Registration District the population of a wide



So that the good example that might justly have been expected from the larger and wealthier communities is often wanting as an element in this education.

Local authorities, thus failing in their turn as teachers, will society at large do better? The Registrar General, in his 20th Report, tells us that in the matter of health we are all "very ignorant or desperately negligent," and in proof of the same he points to 91,652 "unnatural deaths" in England and Wales, and to 140,000 in the whole kingdom, for a single year. And in regard to those who should be its leaders in this first school of knowledge, Dr. Lankester observes (Social Science Papers, 1865-66) "what is really wanted in our country is an intelligent community to take an interest in matters relating to public health. Our present sanitary defects are all more or less traceable to the culpable practice of omitting from our systems of education an inculcation of a knowledge of those laws by which God governs the life and health of man. Those laws have been ignored and trodden under foot, alike by the so called educated and refined, as by the ignorant masses, and the consequences have been the dire judgments of the Almighty in the form of poverty, pestilence, and death." "Life," says Dr. Acland, "is a holy thing, and if communities throw away the lives of the individuals who compose them, or make these sickly, short, or miserable, the community will, in some manner, pay for it. It

suburban and rural area. By overlooking this fact some fallacious conclusions were formed by the public from a mere comparison of death rates at the time of the Meeting of the last Conference. It applies, too, still more to London, which is "not one city in its Registration District, but a *congeries* of cities and towns," spread over 122 square miles to the North and South of the Thames, and containing "plague spots which present as great a mortality as that to be found in any other town throughout the country," (Dr. Lankester), and Dr. Hunter in the 8th Report on Public Health, p. 89, states "there are about 20 large colonies in London of about 10,000 persons each, whose miserable condition exceeded almost anything he had seen elsewhere in England, the result, almost entirely, of their bad house accommodation, which is much worse than was the case 20 years ago." These dark spots, unhappily, disappear from view amongst the 3,080,000 population of its large area average. Bradford is buoyed up in the same manner by its wide area, Leeds by its Hunslet addition, and so on. The Registrar General in the Supplement to the 25th Annual Report announces a constant relation between the density of the population and the mortality. It follows that the death rates of Registration Districts are devoid of intrinsic value, as evidence of urban improvement in healthiness on the contrary, unless due advertence be had to these modifying causes.

“will have work done badly by the crushed artizan while he lives ; it will maintain him in his sickness and his children on his death. In this matter as in many others, many of the people of England have yet to awake as from a dream.” Meanwhile the patient, in default of this teaching, has made his bed for himself in diseases. “In spite of gin, typhus, and infanticide, a degraded, immoral, diseased, and altogether a dangerous class is being bred in our land, who will in our time, or soon after, shake the social fabric.” (Fever in London, by W. Rendle). “This is no slight matter. The evil is sapping the strength of the land, and concerns as well the political economist as the philanthropist and the Christian.” (Geo Godwin, F.R.S.)

To the above the testimony of another competent witness, F. E. Anstie, M.D., may be added from his “Notes on Epidemics.” “It is the simple truth that on the rapidity with which we may be able to introduce the more important of those sanitary improvements which tend to exterminate epidemic diseases, will depend very much of the greatness or feebleness of England as a nation during the next half century. The influence exerted on the labouring populations of crowded towns by the constant presence of such a disease as typhus, and by the havoc committed among their families by other epidemic diseases, is not merely disastrous to life, but highly demoralizing, because it originates such a sense of the insecurity of life as tends to render the lowest classes more and more reckless, and more and more incapable of raising themselves from their debased condition. Few are aware to what a length we have already gone, in this metropolis, towards the creation of a ‘dangerous’ class by our neglect of the most obvious facts. Assuredly, if we shut our eyes much longer to the dangerous tendencies of the present state of things, we, or our immediate successors, will have occasion bitterly to regret our folly. It is our *slowness of action* which is so perilous ; and any statesman who would devote his talents to the organization of a really authoritative medical direction of sanitary reform, would deserve the sincere gratitude of his country.”

## VII.

### THE HEALTH OF TOWNS.

"THE apathy of the Public in matters of the Public Health until panic rouses them to action," has been the subject of constant comment. In ordinary times, whenever sanitary questions are started, the word "Education" is pronounced as a panacea, but the source from which the education is to proceed, as well as the thing itself, is overlooked in these self-satisfied utterances. An able writer\* has told us what education really is. "We often speak of education in a hurried and mistaken way, and in connection with it, speak of schools. There is an error in this. Instruction is the work of the schools, education is the business of the home. It is there that the feelings, affections, habits and aspirations, which govern the conduct of the future life are matured, and the happiness or misery, the success or failure, of the man, depends upon the training of the child. What can be expected of the neglected child when ripened into the man? Upon the domestic character is based that of the citizen. A love of country is not likely to exist where there has never been a love of home. Guizot said long ago, 'Home is the domestic country of the man,' and he pointed to the cultivation of the family ties as essential to the growth of true patriotism. There is no sentimentalism in this, and that country which neglects so impressive a lesson must expect to reap a bitter harvest of discontent and disaffection."

The homes from which this education is to proceed for the classes who most need it, have been sketched by an authority already quoted. "The people who lived in the horrible courts of London, and seldom emerged beyond their portals were just as wild and inaccessible

\* *Social Science Papers*, 1865-66, p. 84, Thomas Beggs, F.S.S.



“as if they were in the heart of Timbuctoo. He believed  
 “it could not be gainsaid, that in nine cases out of ten a  
 “diseased population was an immoral population, and  
 “that as much intoxication came from disease as disease  
 “did from intoxication; the two acted and reacted upon  
 “one another. To improve the moral condition of the  
 “people we must improve their domiciliary condition;  
 “and in doing so we should destroy their appetite for  
 “spirituous liquors. Intoxication was almost forced  
 “upon the people by the depressing influence of the  
 “localities in which they lived. Having gone for hours  
 “together through filthy localities, he could assert from  
 “experience that the atmospheric influences, the sights,  
 “and the smells he exposed himself to produce such a  
 “weakness and faintness that he would have given any-  
 “thing for a glass of spirits to sustain his sinking nature.  
 “If that were the case with himself, who was generally  
 “well fed and in good health, what must be the case  
 “with those who lived in such places perpetually.”  
 (Earl of Shaftesbury, President of the Social Science  
 Association, 1866).

It may safely be asserted that if a small part of the  
 vigour shown in carrying through the late Cattle  
 Diseases Prevention Bill had been applied in prose-  
 cuting the causes of the diseases which yearly afflict the  
 human family, many a dark page would have already  
 disappeared from the sanitary records of the country.\*  
 For these short-comings the public at large have been  
 pronounced responsible. Dr. Lankester observes  
 in his Address of 1865, “I am aware how fully the laws  
 “represent the feelings and opinions of the people of  
 “this country, and if the law is inefficient or unacted  
 “upon, it arises from a want of knowledge on the part  
 “of the people themselves. Not only does this ignorance  
 “tell upon the legislature, but even if it were possible  
 “for the legislature to provide all the conditions of a  
 “healthy existence, this object could not be obtained

\* It is known that the medical inspectors of the Privy Council have been making investigations concerning the Cholera outbreak in East London. For these important services the grant of £500 has been assigned. The Commissioners who investigated the cattle plague, and had some thousands placed at their disposal, complained that they were stinted. (*Lancet*, quoted in *Journal of Social Science* for 1866).

“unless the people were sufficiently instructed to avail themselves of the rights thus conferred upon them. I have alluded to some of the great facts upon a knowledge of which our healthy existence depends. It is in vain that the Legislature enacts a plan upon which houses shall be built to ensure ventilation, unless the inhabitants of those houses understand the worth of fresh air. In vain is fresh water brought to our doors, if in our ignorance and indolence, we refuse to use it. There must be intelligence both in the legislator and those for whom he legislates, if we are to take advantage of our present knowledge of the laws of life to secure us from disease and death.”

In order to cope with these terrible evils various suggestions have been made from time to time. Private benevolence has been invoked, and it has displayed itself of late in several striking instances too well known to require mention. The action of philanthropic associations has already been advocated in the form of Freehold Land Societies and Building Societies, and good has been done by them in many instances to those who were willing to make efforts for their own improvement, and who aspired to better things, and welcomed the help tendered to them,” but to talk about private benevolence as applicable to the larger sanitary requirements of the age in regard to water supply or house accommodation, has been declared by competent authorities to be little short of nonsense, even if it were wise to rely on such exertions as pure benevolence might originate, and the action of private companies has been pronounced by another authority to be “but a mere drop in the ocean to that which was required. As a mere matter of pounds, shillings, and pence it would pay the country to sweep away all the fever-ridden spots in the land, and let the people have buildings where health could be enjoyed, morality observed, and Christian feelings taught. These seats of fever and deplorable wretchedness were more costly, yard by yard, than any part of the Queen’s palaces; they absolutely cost the country more in money.” Another authority, George Godwin, F.R.S. (Transactions of 1864), tells us that it would be cheaper to the

country, in the end, to pick up the young in these haunts of unhealthiness and vice, and to give them costly education at the expense of the State, than to suffer them to remain in their present condition

A third expedient has been resorted to, as a preventive, in the form of voluntary sanitary associations in towns, and it has been worked with good effect in assisting the efforts of the local authorities, or stimulating them to action. Dr. Morgan, in his paper on the Health of Towns (Transactions of 1865), in commenting on the manner in which epidemics in towns radiate from centres—frequently, at first, from a single centre, and after a while from many, and on the importance of the establishment of effective measures to check the spreading of infectious diseases, observes,—“My experience in analysing the disease returns of the Manchester and Salford Sanitary Association convinces me that, if we would enlarge our acquaintance with many interesting problems connected with the public health, we must no longer confine our inquiries to the registration of deaths, but extend them to returns of disease. Such statistics have for several years been successfully collected by the Manchester and Salford Sanitary Association. No fewer than twenty-eight members of the medical profession, connected with the Poor-Law Unions, the hospitals, the workhouses, and gaols, unite in furnishing weekly returns respecting the number and nature of the new cases of disease which may come under their own personal observation. In addition to these tabulated statistics, they frequently specify the particular houses affected by contagious diseases, the causes which appeared to excite them, and other interesting points bearing on the public health. A return, with a summary, drawn up by the Honorary Secretary, is now published at the end of every week, and inserted in the daily papers. In this manner, the very first outbreak of an epidemic, and the quarter in which it may appear, are speedily noted; while the amount of sickness which prevails among a population of half a million may be read at a glance. On the intensity which some of the more formidable diseases assume

‘during different epidemics, and on the localities they “select as their most congenial haunts, much interesting information is accumulating in these returns—the “more interesting from the little attention these “questions have hitherto received.” Unhappily, the incidences of voluntary associations have been apparent in this instance also, and the Manchester and Salford Sanitary Association, after a brief but noble career of usefulness, has disappeared from the stage.\*

It has been a subject of remark for a long time past what a vast mass of material derivable from the returns of the Poor-Law medical officers, and the hospital and dispensary records, lies unemployed and useless, which, if properly classified and localized, and illustrated by a chart, would afford a certain index to town diseases, and enable the medical officers to lay their fingers at once on the spots requiring their preventive vigilance; but for this purpose the services of a Medical Officer of Health, and the hearty co-operation of the local authorities and the more intelligent part of the community, are needed. The uses to which a Mortality Chart can be turned have been shown by the excellent Memoir on the Health and Meteorology of Hull for 1868, by Angus Macmillan, M.D., who, at the close of it, regrets the absence of means for ascertaining the existence of disease, which by prompt interference would check it in its further development, and thereby save the community many valuable lives. The importance of a national registration of sickness from these sources has, also, been forcibly urged by Dr. Ballard in the last Public Health Report.

\* P.S.—An error. It is still alive, and discharging, as before, in default of the local authority, the functions peculiar and proper to that authority.



## VIII.

### THE HEALTH OF TOWNS.

PRIVATE benevolence, philanthropic and sanitary associations, permissive legislation, and public opinion, having thus failed to meet the crying exigencies of the time, the efficacy of the direct action of the Government remains to be considered.

This was exercised for several years with excellent results under the Health of Towns Act of 1848, by means of the General Board of Health. Whether viewed under their nominal appellation of a Health Board, or in their practical operations as a Board of Works, they did great things.\* Sound principles and methods of sewerage were laid down, and a consequent improvement of the public health effected, together with a great saving of money to the community; a system of preventive measures was organized to meet the visitations of cholera; methods of its treatment, founded on information gathered from every quarter, were suggested; the utility of quarantine was investigated and condemned; schemes for extramural interment were framed; an improved system of water supply was investigated; and a decided preference was given to the retention of the supply by the local authorities in their own hands, over the relinquishment of a public work of such vast importance to the community into the hands of trading companies. In this conclusion their opinions coincided with those of the Commissioners of Inquiry into the Health of Towns, who, in their Second Report of the year 1845, had entered into the question in some detail, and arrived at the same result. It would have been well for many a town in the kingdom, the metropolis included, if they had followed this counsel. Besides the

\* Report of the General Board of Health, 1864 and 1865.



above labours, aid and advice were largely extended to all who chose to apply for it, particularly in regard to the reduction of the expenses incurred under the old cumbrous methods of proceeding, and information was collected and diffused respecting the principles and objects of the Act of 1848. Their functions terminated in their laying before the House in 1858 a remarkable Report relating to the Sanitary state of the people of England, exposing to view the existing wasteful expenditure of human life throughout the country, prefaced by an introductory Report of the Medical Officer of the Board full of precepts of sanitary wisdom.

These, and a variety of other measures, all bearing on the public health, and prosecuted in the midst of much open and secret opposition and misrepresentation, occupied the Board in their 1245 sittings during the six years between 1848 and 1853, the names of Carlisle, Shaftesbury, Chadwick, and Southwood Smith being the guarantees for the efficiency of their labours, and a fair way was laid open to some general sanitary organization. The Municipal Governments, however, resisting even advice and assistance from without, proved too strong in the end, and after a few years struggle the new Local Government Act of 1858 was passed, which abolished the Board, and cast adrift the principle of governmental or national supervision of the Public Health, a State duty which appears to have so completely vanished from view that it has found no place in the Paper on the Principles and Functions of Government read at the last Association Meeting.

The place of the Board has since been taken in part by the Privy Council, which has laid down most important sanitary principles, and taken in hand from time to time many valuable and interesting local investigations into outbreaks of disease, and the sanitary condition of classes of the population, but its powers of action are limited, and in cases where the law is not imperative, however urgent they may be, it has found that legislation has no provision against voluntary neglect and perverseness (8th Report, Public Health, p. 23). Much was expected from the coercive action of the Secretary of State under Sec. 49 of the Sanitary Act

of 1866, but there are no means afforded of judging of its operation. The time a high State functionary has to give to such details is so small that the work of the section must, in practice, become a matter of official routine.

Such then is the position in which England stands at present. The evils are material, and may be met by material means. The moral causes open out a different field for reflection. It has been observed, "the rapid growth of our commercial system, our achievements in the arts, and the marvellous increase of wealth, blind us to many of the defects which lie underneath, and are undermining the morality and strength of the people." Or, take a more solemn utterance from one who has faced the pestilence in its worst form. "Such a visitation as a Cholera epidemic brings a torrent of deep questionings. To be placed face to face with one of the great scourges of man; to be enforced to confront, in mass and in detail, the moral and physical evils which engender or increase epidemic disease in our towns, is to be led into stern communings concerning the whole of our social and political life. Why do such evils, long known, exist? Why is so much energy, as certainly exists in favour of all truly benevolent schemes, dormant or misapplied? Does the moral and religious state of our people keep pace with their greater physical advantages? Are we not in danger of forgetting in the midst of boasted material and intellectual progress that it is as certainly true now as ever it was, that the largest part of the misery among men depends at least on moral, and on material causes? These and many other such questions rise in the minds of Englishmen, when by social or political trial their souls are stirred within them." (Memoir of Cholera at Oxford, p. 6, by H. W. Acland, M.D., F.R.S). One more voice, as from the grave, may be added. "England may be destined to spread a knowledge of sanitary science over the globe, to set an example to other people of obedience to the physical laws laid down by the Almighty, and in the words of Milton's magnificent prose, 'to lead the nations in the way of life.' But whether England herself have the

“wisdom to walk in this way, and whether others follow  
“or not therein, be assured that in the observance of  
“these immutable principles the permanent prosperity  
“of States is bound up. As the Scripture says, ‘God is  
“not mocked,’ and His laws are not broken with  
“impunity.”\*

\* Address by Sir Charles Hastings, M.D., Transactions of 1864.

## IX.

### REMEDIES.

It is when we come to speak of remedies that the difficulties rise to view.

Take, for instance, the single evil of overcrowding. "For overcrowding parishes pay week by week and "year by year far more than the entire rental of the "property. It is thus that these abominable houses are "kept up—houses into which healthy people may go, "but out of which nothing but disease and misery "come." "Overcrowding which impairs health and "morals"—"Overcrowding which renders all teaching "useless, until those to be taught are reasonably and "decently housed." (Transactions of 1864). "People," says Dr. Hunter, "are not now alive to tell us how "children were brought up before this age of dense "agglomerations of poor began, and he would be a rash "prophet who should tell us what future behaviour is to "be expected from the present growth of children who, "under circumstances probably never before paralleled "in this country, are now completing their education "for future practice as 'dangerous classes,' by sitting up "half the night with persons of every age, half naked, "drunken, obscene and quarrelsome." (8th Report on Public Health).

"Viewing the towns as a whole, the evil is probably greater in the "present day than at any previous time of our history. Upwards of two "millions of the population of our large towns are living in houses, or rather, I "should say, rooms and cellars, in which health, and with it capacity for labour, "is well-nigh physically impossible. These are the people whom no efforts can "induce to avail themselves of opportunities of instruction, even where that "instruction is gratuitously provided for them, and it is among their dwellings "that those diseases originate which, in the sickness and death they occasion, "entail a heavy penalty on society at large—kindling the flame from which the "sparks fly upwards, but where those sparks may alight, and how extended "may be the conflagration they will awaken, none can tell. The last 25 years "have witnessed no general improvement, and there are as yet no signs that "evil is remedying itself." Town Life among the Poorest, by J. E. Morgan, M.D., Paper read at British Medical Association Meeting, Oxford, August, 1868.

Legislative remedies fail to reach this glaring evil. An experienced Medical Officer of Health asks, "We have at present the power to regulate the number of people living in one room; provided the persons are not of one family, the law permits us to turn them out; but where are they to go?"\* The people are already almost unable to get a covering for their heads; and the remedy which the law puts in our hands is simply to send them to the poor-house or into the open air. The difficulty is so great, that in many cases I have found that we held a power which we were utterly unable to put into operation. With regard to the suggestion that we should put dwelling-houses under the same regulation as lodging-houses, I see great difficulty in carrying that into effect. We find a natural jealousy on the part of the people towards inspection, even in the lodging-house department. To put the Act strictly in force, the houses in that part of the town where the poorer classes reside, would require to be under daily and weekly inspection. What we are called upon to do is to endeavour to place the remedy within the reach of the people themselves, by providing a better supply of cheap houses for the poor of the population."

This opinion is supported by another authority, who says, "While we nurse a high-sounding and pretentious philanthropy, we allow a state of things to exist that would disgrace a heathen clime. Men, women, and children are living a life of savages in the midst of civilised beings. To put the Acts of Parliament in force would be simply to chase the poor from place to place, and increase the hardships of their lot. District would war against district, and what one

\* When the same question was put elsewhere, the answer was, "We cannot tell; we only know it will be destruction to themselves and others, if they remain." Dr. Farr observes (30th Report of Registrar General, p. 213) "it is now as then a conflict of difficulties; for the question arises, where can the people live if you turn them out of cellars or garrets; and the alternative is in appearance cruel. But as a healthy city of a limited number of inhabitants enjoys life and fulfils the destiny of its race, while a crowded, suffering, sickly, degenerated city of twice the population only drags on a wretched existence in violation of the principles of life and the operations of nature, laws against over-crowding must be rigorously enforced. A wise humanity involving self-preservation is the law of every city."



“gained would be at the expense of another.” (Social Science Papers of 1865.)

This objection was met at the time by the statement that the law had been acted upon in a neighbouring town with great and immediate beneficial effect on the Public Health, that although by the enforcement of such laws for the public preservation, a temporary evil was occasioned, yet that very temporary evil removes itself by the demand for temporary house accommodation which it causes, and that one great means of remedying the present evil of overcrowding, would be by building cheap houses in the suburbs, and giving the labouring classes opportunity of extricating themselves from the crowded parts of our densely populated towns.

But for this purpose land must be obtained, and land in the neighbourhood of cities is not generally to be had for such objects, except at a monopoly price, and often is not to be had at any price.\* Hemmed in in places by large properties the towns have not always the means of expansion afforded them. We are, accordingly, told by another authority, in the course of the same discussion, that the remedy must be a national one, and that Government must either find better accommodation for these people, or they must find land where cottages and suburban villages can be erected. Minor remedies glanced at by the speakers, such as calling private benevolence into play or additional encouragement to Building Societies, are declared to be but drops in the ocean. Even with regard to private benevolence, its powerlessness is shewn by another practical authority elsewhere,

\* The Registrar General opens the same cause of difficulty in the 30th Annual Report, p. 219. “If we ascend from zymotic disease to its generating element, “and from this to bad dwellings, bad habits, and bad municipal organization, “causes are often found lying beyond in bad laws. A City becomes the seat of “trade and manufactures, in which many workmen from the country are required: families are brought together, and are crowded in existing houses; “and it is found impossible to extend the house accommodation by building new “houses, on account of existing land tenures. The owners, whether corporations or individuals hold on limited tenures, and as they cannot sell the freehold, or grant leases for long terms of years, the land is unavailable for building purposes. Houses are not built to meet the demand, and the want of “decent dwellings is inevitable. To abolish all the rookeries is possible now, “with free and cheap locomotion, if the law give facilities to the acquisition of “that necessity of healthy life, sites for dwelling houses. A bad land tenure is “a cause of death.”

—"We have every kind of liberty, but the right one. "We have liberty to protect, even at the expense of "many deaths and large taxation, that which is called "vested interest; but liberty to proceed the straightest "way to any great good we can as yet be scarcely said "to have. In a deputation to Mr. Peabody and his "trustees, which I attended, we urged, why not purchase "small plots, the worst in London, a court or alley here "and there, and show us how to build cheaply, and in a "manner that shall be at once both paying and healthy; "so that we, in all the worst parts of London, seeing "that it would not be a losing scheme, might everywhere "imitate you? And the answer was, so far as I can "recollect, 'There is much complication and many "'interests; nothing but compulsory action could deal "'with it. We cannot buy as it is, and we cannot get "'an Act to enable as to purchase these places.' And "yet something of this sort appears to be our only "remedy for our scarce, and filthy, and expensive habi- "tations for the poorer people." (Fever in London, by W. Rendle.) One remedy, indeed, has been suggested in behalf of those who most need protection, but legis- lation has not yet reached that point, namely, "no "house should be allowed to be inhabited unless it be "provided with appliances of cleanliness." "We want "the persons who let their houses to do what once I "mentioned in a Committee of the House of Lords, but "which was not received with great favour. I said, I "would render it illegal to let a house without good "drainage, and a good supply of water." (Minutes of Evidence, 1869.)

It was hoped that the communities would take action under the 35th section of the Sanitary Act of 1866 to remedy the evils from which they chiefly suffered, but we are told on good authority (Transactions of 1868, p. 462) that very few even of the Metropolitan Local Boards have availed themselves of its provisions. Legal facilities for the purchase of land were granted under the Labouring Classes' Dwellings' Act of 1866 to Local Boards and Voluntary Associations, but the Act is said to be almost inoperative. Much was hoped from the promised Artizans' and Labourers' Dwellings' Act of the Session

of 1868, but it has already fallen to the ground a dead letter; "if it be found to preserve any vitality it will probably be in the obstructive direction." It is plain that in this, as in the other enactments, a motive power is wanting to put them into operation. The Labourers' Dwellings' Act of 1855 was not found by Dr. Hunter anywhere in operation (8th Report, Public Health), and the older Labouring Classes' Lodging House Act of 1851, "an admirable measure," intended for municipal action, has been left to the public spirit of a few capitalists (*Idem*, p. 94), one place, Huddersfield, excepted.

Municipal and local, rather than Government action, is the boast of England, and the life-blood of the nation in civil affairs. "We enervate people by taking their "proper work, and doing it for them" But a limit is imposed on this otherwise sound principle by considerations of the National Health. In a recent parliamentary inquiry (*Minutes of Evidence*, 1869, p. 80) a competent witness was asked, "Do you not think it right that municipalities should spend as they please their own "money?" And the answer was, "Still there ought to "be a controlling influence over them to see that their "money was spent properly, especially when the health "of the different populations is brought to bear." The question expresses the consideration which appears to lie at the root of all permissive sanitary legislation, and it is fully met by the reply. The towns, having in the year 1858 insisted on the uncontrolled sanitary direction of their affairs, must, for the national interests, be held to have accepted, along with the weighty responsibilities of the trust, the pecuniary obligations connected with it, and are no longer in a position, as regards the health of their communities, to act or not to act as they think proper.

If these are the difficulties in the way of a single branch of Sanitary Reform, what will be done for the ever-increasing pure-water wants of the country? What for the proper sewerage of cities and towns? "Mised and "dazzled by our gigantic improvements, are we not "neglecting the condition of those who form a vital part "of the life of the nation? Is not our civilization crushing down those who have least power to help themselves? "Does not the rapid growth of our commercial system,

“our achievements in the arts, and the marvellous increase in wealth, blind us to many of the defects which lie underneath, and are undermining the morality and strength of the people?” These are solemn questions, and they require deep national heart-searchings for their answer.



## APPENDIX.

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### ON BRISTOL DEATH-RATES.—P. 33.

The sanitary improvements effected in Bristol, and their results in the saving of life, came under public notice on the occasion of the late meeting of the Association for the Promotion of Social Science in this city, and very large conclusions regarding them, drawn from the death rates of the extensive Registration District, were arrived at by the public press, and have since found frequent utterance. These over-estimates, which have not, apparently, received any countenance from the medical faculty on the spot, have the effect of obscuring the real merits of the case, and of inducing exaggerated expectations for the future. In fact the field of vision, if it be extended over the entire Registration District of Bristol and Clifton united, as it is exhibited in the weekly and periodical returns of the Registrar General, is so wide and varied that no accurate conclusions can be drawn from the data presented by it. The only sure foothold for a view of the facts is presented in the heading "Bristol," known as "the Bristol Incorporation," No. 339 of the Annual Reports of the Registrar General, which comprises 66,027 inhabitants on an area of 1840 acres (24th Annual Report for 1863, p. 60). This limited field presents a death-rate of 29 per 1000 for the decennial period 1841—50, after the corrections noted in p. 50 of the Preface to the Supplement of the 25th Annual Report, and 28 per 1000 for the period 1851—60. The mean calculated death-rate for the next seven years, 1861—66, without the corrections referred to, stands at 26·9. For the year 1867 it stood at 23·1. In the event of the last figure being maintained in the Reports for 1868 and 1869 for this portion of the Registration District, then a great saving of life will have been effected in it alone. But Bristol includes three large and crowded suburbs besides, numbering not less than 70,000 inhabitants; and with regard to this outlying portion, the Registration District and the Parliamentary Borough District, the latter of which is under the jurisdiction of the Local Board of Health, are not conterminous, so that there are no reliable data for this suburban portion. Dr. Buchanan, in his Report on Bristol in the 9th Report on Public Health, p. 58, written in a spirit very favourable to the sanitary efforts of the city, puts down 1 per cent. as saved in the previous rate of mortality, but in this calculation the population of the entire Registration District, viz., 160,714 on an area of 31,315 acres, is assumed, and even here a want of coincidence in the limits seems to have embarrassed the result.

It is pleasant and instructive to turn from this confusion of death-rates to facts, and to trace in Dr. Buchanan's Report the real causes of the undoubted sanitary improvement in a steady and continuous advance since 1860; first, in the quantity and quality of the Water Supply, which is now brought by the Water Company, to whom the Town Government have surrendered the privilege, from distances varying from five to twelve miles from the Mendip range, and is served at different levels up to the height of 330 feet on the continuous supply system: secondly, in the sewerage and its subsidiary arrangements down to the important *minutiae* of shoots and ejects, and the like: and



third, in Paving and Cleansing and constant general inspection in all its multifarious details. Notable sanitary progress since 1865 is specially recorded by Dr. Buchanan, and it is in respect to cholera that the results of this activity are most prominently to be found; the deaths, which in 1849 were 90 in the 10,000 in the Bristol District, as distinguished from the Clifton District, and 11 in the 10,000 in 1854, having sunk to  $1\frac{1}{2}$  in 1866. The preventive measures adopted that year to arrest the cholera many months before its appearance, are described by the Medical Inspector, p. 224, Cholera Report of 1866, and form a useful manual, and it is to the honour of the City that the Typhus epidemic outbreak in 1865 gave a great spur to its sanitary efforts, and instead of producing a tendency to suppression or excuse, led to a timely application to the Privy Council for inquiry and advice (8th Report, Public Health, p. 21). It is a matter of regret that owing to a want of sound data the local results of these persistent exertions cannot be more distinctly presented to view. In this survey the specific measures taken to prevent the spread of the maladies, and the very important conclusions elaborated with regard to the property of their contagiousness are not included. They are touched on in p. 30, 9th Report, Public Health, and do not enter the field of lay comment.

Still, Bristol is far from perfection. "Bristol," says Dr. A. P. Stewart in 1867, "certainly neither looks nor smells wholesome. The odours that greet the stranger on his arrival, or while walking the streets, from all sorts of factories, but especially from slaughter-houses, tanneries, bone-boiling and tallow-chandlers' establishments, and from the fetid waters of the floating harbour, give evidence the reverse of welcome how much room there is for improvement;" and Dr. Budd, in the British Medical Journal of April, 1867, "observes, "if there be any one who supposes that destitution, crowding, squalor, filth of all kinds, and the thousand other conditions which favour the spread of contagious diseases, no longer abound in Bristol, a morning's walk with the Poor Law Medical Officers in the course of their duties will suffice to disabuse him," and it should not be forgotten that in respect to the condition of the housing of its town population it is placed socially as well as geographically only half-way between Plymouth and Birmingham, Plymouth having been put by Dr. Hunter the lowest in this respect in the scale, and Birmingham the highest of those visited by him (8th Report, Public Health, p. 120).

One great drawback to the City may be noted. Eruptive diseases are excluded from the Public Institutions (6th Report on Public Health, p. 604), and the want of a Fever Hospital has long been urged by those who were most competent to pronounce on its necessity, but it has not yet been supplied, a want "nationally dangerous, for it must not be forgotten that, like Liverpool, it is a large seaport, at which vessels are continually arriving from foreign parts." (Journal of Science, October, 1866.)

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#### NOTE ON NEWCASTLE.—P. 16.

"The Town of Newcastle-on-Tyne contains a sample of the finest tribe of our countrymen, often sunk by external circumstances of house and street into an almost savage degradation." (Dr. Hunter, 8th Report on Public Health, p. 50.) The opinion is supported by the account in pp. 145—157 of the same volume.

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#### NOTE ON MANCHESTER.—P. 16.

The Registrar General observes, in his remarks on the Second Quarter of 1869, "The City of Manchester, which is also supplied with an abundance of pure water, shows a high rate of mortality. Why cannot the administrative

“abilities which have been so successful in commanding a pure water supply, be  
 “successfully applied, not only in the demolition of old tenements, but in the  
 “erection of new constructions, and improved house accommodation for the  
 “poorer classes, and also in enforcing the law against over-crowding?”

#### NOTE ON LEEDS.—P. 16.

This may seem a severe opinion, but it is amply borne out by the facts on record. It would scarcely be fair to quote from the account of Leeds by James Smith, of Deanston, in the 2nd Report of the Commissioners of Inquiry of the year 1845. Many of the other towns reported on were at that time in a very bad sanitary condition, and public attention and legislation had not been attracted to the general subject. But a most unfavourable account of Leeds appeared, after an interval of twenty years, in the 8th Report of Public Health by Dr. Hunter, who had been commissioned in 1865 by the Lords of the Privy Council, to inquire into the circumstances endangering the Public Health there, the heads of which, if given, would more than bear out the conclusion arrived at from the evidence by their chief Medical Adviser in p. 23 of that Report, that “with such an administration of the Nuisances Removal Act, it might, perhaps, “in proportion to the importance of the town, be deemed the worst which had “come to the knowledge of that department.” It is added in a note that for some time past considerable exertions had been making there to amend the state of things described in the Report, and in p. 41 of the publication entitled “The Medical and Legal Aspects of Sanitary Reform,” the work is said to have been bravely begun under its Medical Officer of Health, but the accumulated evils represented in these and other publications, such as “A Chapter on Leeds,” in Mr. Hole’s work, and in Dr. Allbut’s paper on the dwellings of the poor in Leeds, in Vol. 3 of the Transactions of the Epidemiological Society, will require a long time for their removal.

North and South, East and West, are now linked together in one sanitary bond, and example as well as disease is communicable from one to another of the great body. Each has a right to comment on his neighbour, and neighbourhood is not limited by distance. “The main agencies of cure are the “systematic publication of facts, and the influence of general opinion.”

#### NOTE ON LIVERPOOL.—P. 16.

Various causes have been assigned for the great unhealthiness of Liverpool but they seem to centre in the simple fact of over-crowding. The manner in which the little bits of ground at the back of the houses in what were before the most crowded quarters, were converted into inner courts by building round them, and breaking open approaches through the street dwellings; and the condition of those courts, “places which nothing but a tornado could effectually ventilate,” have been described by Dr. Hunter in the 8th Report, Public Health, p. 476. An interesting account of the painstaking efforts of the chief Medical Officer of Health to alter and improve the courts by turning them, as it were, inside out, has been given by Dr. Hunter in pp. 75—81 of the same volume. The courts thus filled in to choking with human beings number 3,173 in all, and, unless extraordinary efforts are made, the time needed for their reconstruction, and for the reform of “the midden system, as it has long prevailed in Liverpool, which even surpasses the evil of the over-crowded courts,” will have to be measured by fractions of a century, rather than by years.

